

REMARKS

Claims 1-16 are pending in this application. By this Amendment, claims 1 and 14 are amended and claims 15 and 16 are added. Support for the amendments to claims 1 and 14 can be found at least at page 6, lines 22-30, page 8, lines 14-24 of the specification and in Figs. 1, 2 and 6. Support for the subject matter of new claims 15 and 16 can be found at least at page 13, lines 25-29 of the specification. Thus, no new matter is added. Reconsideration based on the above amendment and the following remarks is respectfully requested.

I. Rejections under 35 U.S.C. §103**A. Kuhmonen in view of Girts**

The Office Action rejects claims 1-9 and 11-14 under 35 U.S.C. §103(a) as being unpatentable over Kuhmonen (U.S. Patent No. 5,248,042) in view of Girts (U.S. Patent No. 5,292,006). Applicants respectfully traverse this rejection.

Specifically, Applicants assert that neither Kuhmonen nor Girts, alone or in combination, disclose or suggest a screening machine including a vibrating screen having at least one screen surface, said vibrating screen conveying material from a first end towards a second end, feeding means comprising a conveyor that feeds material to be screened towards the screen surface and at a fixed location in the first end onto the screen surface where the screening machine performs the steps of determining the amount of material on the screen surface by automatic measurement; and controlling the amount of material on the screen surface by adjusting the conveying speed of the conveyor on the basis of the measurement by automatic control in such a manner that the conveying speed, which is above zero, is changed to a different conveying speed, which is above zero, in one of the following ways: a) providing upper and lower preset values (val_{max} , val_{min}) for the measurement value (val_m) of a variable dependent on the amount of material on the screen surface, lowering the conveying speed of the conveyor without stopping the conveyor when the measurement value (val_m)

passes one of the preset values, and increasing the conveying speed of the conveyor when the measurement value (val_m) passes the other preset value, or b) providing a preset value $((\Delta val_m / \Delta t)_{max})$ for a speed of change of the measurement value (val_m) of the variable dependent on the amount of material on the screen surface, and changing the conveying speed of the conveyor without stopping the conveyor when the speed of change of the measurement value (val_m) of the variable exceeds the preset value $((\Delta val_m / \Delta t)_{max})$, as recited in independent claim 1 and similarly recited in independent claim 14.

To the contrary, Kuhmonen discloses a screening apparatus 10 which includes a conveyor 18 that feeds material into an interior of a horizontally rotating drum 20 (*see* col. 3, lines 13-15). Further, Kuhmonen discloses feedback control means 46 which temporarily stop the feeding conveyor 18 when the horizontal rotating drum 20 becomes overloaded. In particular, the feedback control means 46 stops the feeding conveyor 18 when a resistance in turning the horizontal rotating drum 20 increases above a specified value (*see* col. 3, lines 58-63).

As acknowledged by the Office Action, Kuhmonen fails to disclose lowering the speed of the conveyor without stopping the conveyor. In particular, Kuhmonen discloses an on-off arrangement where the conveyor 18 is temporarily stopped (*see* page 3 of the Office Action). However, the Office Action alleges that Girts cures the above deficiencies of Kuhmonen because Girts allegedly discloses control means that variably control the rate at which a material is placed onto a conveyor (*see* col. 4, lines 1-10).

However, Girts discloses a screening plant 10 that includes a grizzly grate 20 and a feed plate 30. The feed plate 30 operates to control the amount of material flowing through grizzly grate 20 onto screens 50. Because the feed plate 30 controls the material flowing to the screens 50, Girts fails to disclose feeding a material to be screened towards a screen surface at a fixed location. In particular, as the feed plate 30 opens, material falls onto screen

50 at an ever-increasing area as the feed plate 30 opens. In other words, the location where the material falls onto the screen 50 changes as the feed plate 30 opens.

Therefore, the material is not conveyed to a fixed location at a first end of the screen. Similarly, Kuhmonen merely discloses the conveyor 18 feeding into the anterior of the horizontal rotating drum 20. Thus, neither Kuhmonen nor Girts, alone or in combination, disclose or suggest a conveyor that feeds material to be screened towards a screen surface and feeds the material at a fixed location in a first end onto the screen surface, as recited in independent claim 1 and similarly recited in independent claim 14.

Additionally, as discussed above, Girts controls the amount of material that falls onto the screen 50 by controlling the speed at which Girts' feed plate opens. Further, the amount of material that falls onto the screen 50 is also controlled by the combined effects of gravity, the location of material on the feed plate 30, and the size of the opening provided by the retracting feed plate 30. This results in an indefinite feeding speed of the material onto the first screen 50 that cannot be set to a desired value.

Further, the material passing through the grizzly grate 20 can be accumulated randomly on top of the feed plate 30 so that, for example, the majority of the material falls onto the first screen 50 during the initial opening of the feed plate 30, or the majority of the material does not fall onto the first screen 50 until the feed plate 30 is fully opened.

Additionally, in Girts, when the feed plate 30 gradually opens, the material may fall on different spots of the first screen 50, which results in different processing times for this material. In contrast, using the claimed conveyor, it is possible to feed the material onto one end of the screen and obtain the same processing time by the screen for all of the material that is fed onto the screen.

Thus, neither Kuhmonen nor Girts, alone or in combination, disclose or suggest adjusting the conveying speed of the conveyor on the basis of the measurement by automatic

control in such a manner that the conveying speed, which is above zero, is changed to a different conveying speed, which is above zero, as recited in independent claim 1 and similarly recited in independent claim 14.

For at least the reasons discussed above, the combination of Kuhmonen and Girts fails to disclose or suggest each and every feature of independent claims 1 and 14. Therefore, independent claims 1 and 14 remains patentable over the combination of references. Claims 2-9 and 11-13 are patentable at least for their dependencies from independent claim 1, as well as the additional features they recite. Accordingly, Applicants respectfully request withdrawal of the rejection.

B. Kuhmonen in view of Girts further in view of Greene

The Office Action also rejects claim 10 under 35 U.S.C. §103(a) as being unpatentable over Kuhmonen in view of Girts and further in view of Greene (U.S. Patent No. 4,665,772). Applicants respectfully traverse this rejection.

For at least the reasons discussed above, the combination of Kuhmonen and Girts fails to disclose or suggest each and every feature of independent claim 1. Greene fails to cure the above-noted deficiencies of Kuhmonen and Girts. Therefore, independent claim 1 remains patentable over the combination of references. Claim 10 is patentable at least for its dependency from independent claim 1, as well as for the additional features it recites. Accordingly, Applicants respectfully request withdrawal of the rejection.

II. New Claims Define Patentable Subject Matter

For at least the reasons discussed above, independent claims 1 and 14 remains patentable over the combination of references. Claim 15 is patentable at least for its dependency from independent claim 1, as well as for the additional features it recites. Claim 16 is patentable at least for its dependency from independent claim 14, as well as for the additional features it recites.

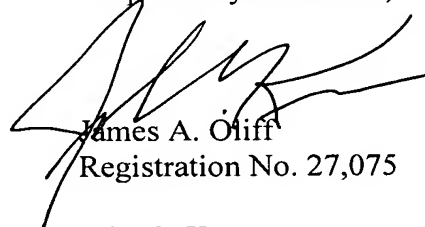
Further, Kuhmonen, Girts and Greene fail to disclose or suggest adjusting the speed of a conveyor under the condition that a measurement value exceeds a preset value and under the condition that a speed of change of the measurement value exceeds the preset value, as recited in claim 15 and similarly recited in claim 16.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:
RCE Transmittal

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